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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,338

01/26/2004

Isao Iwaguchi

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7590

05/02/2005

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EXAMINER

TRAIL, ALLYSON NEEL

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/763,338	<b>Applicant(s)</b> IWAGUCHI ET AL.	
	<b>Examiner</b> Allyson N. Trail	<b>Art Unit</b> 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,13,14 and 18 is/are rejected.
- 7) ☒ Claim(s) 2-12 and 15-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/26/04, 10/7/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 15, 16, and 17 are objected to because of the following informalities:

Re claims 15, 16, and 17 line 1: "the computing" is not disclosed in claim 14.

Perhaps the claims should instead recite, "the calculating".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 13, 14, and 18 rejected under 35 U.S.C. 102(b) as being anticipated by Iwaguchi et al (6,334,572).

4. Iwaguchi et al teaches the following in regards to claims 1, 13, 14, and 18:

"A bar-code reader having a photoelectric conversion unit for converting reflected light from a bar code into an electric signal. (Abstract).

"The bar-code reader includes a determination unit for determining, based on measurement of a distance between changing points, whether a changing point is detected as a true changing point at which a white stripe or a black stripe is changed to a black stripe or a white stripe in a bar code or as a false changing point; and a correcting unit for correcting the changing point detected as the false changing point to

the true detecting point based on the changing point determined as the true changing point.” (Abstract).

“Referring to FIG. 1, the conventional bar-code reader has a photoelectric conversion unit 201, an amplifier (AMP) 202, a differentiating circuit 203, a peak detecting circuit 204, a gate generating unit 205, a black-edge generating unit 206, a white-edge generating unit 207, and a B-W width counter 208. The photoelectric conversion unit 201 converts reflected light from a bar code into electric signals.” (Col. 1, lines 41-47).

“The differentiating circuit 203 differentiates the signals generated by the AMP 202 so as to generate differential waveform signals. The peak detecting circuit 204 detects minus and plus peak points of the differential waveform signals. The gate generating unit 205 generates enable signals to cause the peak detecting circuit 204 to detect the peak points. The black-edge generating unit 206 generates edge signals corresponding to the minus peak points detected by the peak detecting circuit 204. The white-edge generating unit 207 generates edge signals corresponding to the pulse peak points detected by the peak detecting unit 204. The B-W width counter 208 counts a distance between change points corresponding to the respective edge signals.” (Col. 1, lines 49-61).

“The bar-code reader using the differential operation detects peak points of the differential waveform of an electric signal, so that change points between white and black areas of a bar code can be detected.” (Col. 1, lines 62-65).

"Referring to FIG. 2, the bar-code reader has a photoelectric conversion circuit 1, a amplifier (AMP) 2, a differentiating circuit 3, a peak detecting circuit 4, a bar width counter 5, a true/false peak determination unit 6 and a correcting unit 7." (Col. 6, lines 10-15).

"On the other hand, in a case where the true/false peak determination unit 6 determines whether a changing point is the true changing point or a false changing point caused by the Fresnel diffraction and the correcting unit 7 corrects the false changing point (after correction in FIG. 6), the bar width counter 5 counts the width of the white stripe as 100 counts and the width of the black stripe as 100 counts. Thus, the bar-code reader according to the present invention corrects detected changing points corresponding to edges of strips of the bar code and prevents the bar code from being erroneously read." (Col. 7, lines 55-65).

***Allowable Subject Matter***

5. Claims 2-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 15-17 are objected to as being dependent upon a rejected base claim and also objected to above, but would be allowable if rewritten in independent form and overcoming the above objection, including all of the limitations of the base claim and any intervening claims.

The following is an examiner's for allowance: Although prior art teaches optical bar-code readers including an optical scanner, a differentiation unit, a dividing unit, a

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bar-code correcting unit, and a converter, the above identified prior art of record, taken alone, or in combination with any other prior art, fails to teach or fairly suggest the specific features of claims 2-12 and 15-17 of the present claimed invention. The specific limitations of the correcting unit disclosed in both claims 2 and 3 are not taught in prior art. The correcting unit of claim 2 includes an acquisition unit that acquires amplitude information of the positive waveform using a timing signal corresponding to the positive waveform and amplitude information of the negative waveform using a timing signal corresponding to the negative waveform. The correcting unit of claim 3 includes an acquisition unit that acquires amplitude information of the positive waveform by generating a timing signal corresponding to the positive waveform, and the amplitude information of the negative waveform using a timing signal in which the timing signal corresponding to the positive waveform is delayed by a predetermined amount. Both correcting units described in claims 2 and 3 include a synthesizing unit that synthesizes the amplitude information of the positive waveform and the amplitude information of the negative waveform to create the corrected bar-code data. Claim 4 of the current invention also includes limitations not disclosed in the prior art. Specifically, the correcting unit disclosed includes a waveform-generating unit that generates a synthesized waveform by synthesizing the positive waveform with the negative waveform that is delayed by a predetermined amount, and an acquisition unit that acquires amplitude information from the synthesized waveform using a predetermined timing signal and uses the amplitude information acquired as the corrected bar-code data. The limitations of claims 15 and 16 are also not disclosed in prior art. These

limitations include acquiring amplitude information of the positive waveform using a timing signal corresponding to the positive waveform and amplitude information of the negative waveform using a timing signal corresponding to the negative waveform, and also acquiring amplitude information of the positive waveform by generating a timing signal corresponding to the positive waveform, amplitude information of the negative waveform using a timing signal in which the timing signal corresponding to the positive waveform is delayed by a predetermined amount. The above discussed limitations are not disclosed in prior art and moreover, one of ordinary skill in the art would not have been motivated to come to the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Wakamiya et al (2002/0020747) and Watanabe et al (2001/0015378).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson N. Trail* whose telephone number is (571) 272-2406. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [[allyson.trail@uspto.gov](mailto:allyson.trail@uspto.gov)].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Allyson N. Trail  
Patent Examiner  
Art Unit 2876  
April 28, 2005

A handwritten signature in black ink, appearing to read 'Karl D. Frech', with a stylized, flowing script.

KARL D. FRECH  
PRIMARY EXAMINER